

CLAIMS

1. A Fresnel lens sheet comprising unit total reflection Fresnel lenses arranged on a light-entering side, each unit total reflection Fresnel lens having a light-entering surface and a total reflection surface that totally reflects a part of or all of an imaging light that has passed through the light-entering surface to deflect the light in a desired direction, characterized by fulfilling the relationship:

$$H \times H / (10 \times E \times T \times T) \leq 3L / 2000,$$

where H represents a length (cm) in a vertical direction of the Fresnel lens sheet; L, a length (cm) in a horizontal direction of the Fresnel lens sheet; T, a thickness (cm) of the Fresnel lens sheet; and E, a modulus of elasticity (kgf/cm<sup>2</sup>) of the Fresnel lens sheet.

2. The Fresnel lens sheet according to claim 1, characterized in that the Fresnel lens sheet comprises a base, and a Fresnel lens element, provided on the base, the Fresnel lens element including the unit total reflection Fresnel lenses.

3. The Fresnel lens sheet according to claim 1, characterized in that the Fresnel lens sheet comprises a Fresnel-lens-molded sheet having the unit total reflection Fresnel lenses, and a backing sheet laminated to a light-emerging surface of the Fresnel-lens-molded sheet.

4. The Fresnel lens sheet according to claim 3, characterized in that the backing sheet is a lenticular lens sheet having lenticular lenses.

5. The Fresnel lens sheet according to claim 3, characterized in that the Fresnel-lens-molded sheet and the backing sheet are made from a same material.

6. The Fresnel lens sheet according to claim 1, characterized

in that the Fresnel lens sheet comprises a light-diffusing agent for diffusing light.

7. The Fresnel lens sheet according to claim 1, characterized in that the Fresnel lens sheet is colored so that it absorbs light.

8. The Fresnel lens sheet according to claim 1, characterized in that the Fresnel lens sheet comprises a light-absorbing layer that absorbs light.

9. The Fresnel lens sheet according to claim 1, characterized in that a reflectance-lowering layer for lowering reflectance is formed on one surface or both surfaces of the Fresnel lens sheet.

10. A rear projection screen comprising a Fresnel lens sheet according to any of claims 1 to 9.

11. A rear-projection-type display characterized by comprising:

a rear projection screen according to claim 10; and  
a light source from which imaging light is obliquely incident on the rear projection screen.

12. A rear projection screen characterized by comprising:

a Fresnel lens sheet according to any of claims 1 to 9;  
and

lenticular lenses for diffusing light, formed on a light-emerging surface of the Fresnel lens sheet.

13. The rear projection screen according to claim 12, characterized in that a reflectance-lowering layer for lowering reflectance is formed on one surface or both surfaces of the rear projection screen.

14. A rear-projection-type display characterized by

comprising:

a rear projection screen according to claim 12; and  
a light source from which imaging light is obliquely incident on the rear projection screen.

15. A rear projection screen characterized by comprising:  
a Fresnel lens sheet according to any of claims 1 to 9;  
and

a lenticular lens sheet having lenticular lenses for diffusing light, placed on a light-emerging side of the Fresnel lens sheet.

16. The rear projection screen according to claim 15, characterized in that a reflectance-lowering layer for lowering reflectance is formed on one surface or both surfaces of the rear projection screen.

17. A rear-projection-type display characterized by comprising:

a rear projection screen according to claim 15; and  
a light source from which imaging light is obliquely incident on the rear projection screen.